

The Role of Polish Gas Investments in enhancing Central and Eastern Europe Energy Security

Tomasz Mlynarski
Jagiellonian University, Poland
tomasz.mlynarski@uj.edu.pl

Abstract. The aim of the article was to assess Poland capabilities as a regional player in gas supply diversification projects in Central and Eastern Europe. The article is a contribution to a pan-European discussion on energy security and depoliticisation of the EU- Russia relations. Poland, due to its geographical location and access to the Baltic Sea, may yet play an important role in the regional diversification projects of gas supplies for the rest of Central Europe. The article concludes following: (1) Poland becomes an important participator and initiator of regional gas diversification projects in East-Central Europe, (2) Thanks to the investment in Świnoujście, Poland may become an active participant in the new gas layout in Europe, (3) Russia is and will remain an important exporter of natural gas to Europe; however, extension of LNG terminals in the Baltic Sea will allow a more flexible gas import policy.

Keywords: Poland, Central and Eastern Europe, dependency, diversification, depoliticise gas relations, Russia

1 Introduction

With over 500 million potential customers, the European Union is the largest regional market, responsible for 20% of world energy usage, which makes it one of the most prominent energy importers worldwide. The EU – especially its Eastern part - remains heavily dependent on importing fuels. In the Baltic states and the southern Central and Eastern Europe (author refers to: Latvia Lithuania Estonia, Poland, Czech Republic, Slovakia, Hungary, Romania, Bulgaria, Croatia) barriers between energy systems are more widespread and persistent. For the first time, however, the countries of Central and Eastern Europe endeavour to real cooperation exiting out of paper political declarations, as it is shown by initiatives of building energy infrastructure interconnections (Joint Statement 2015; Marzecki 2013). Such Cooperation can lead to establishing and enhance a sustainable economic development in whole Central and Eastern Europe (CEE).

The aim of an article is to present the Poland's importance as a regional player actively aiming at increasing the energy security in the gas sector. Poland, together with its partners from the Visegrád Four countries (V4), must take all measures necessary to expand the gas transmission and interconnection infrastructure. This will significantly help to facilitate a safety of the gas supplies in the region; however, appropriate mechanisms must be in place to lobby the European Commission in Brussels for financial support for these investments.

This study addresses the important research problem of how to improve the energy security of the CEE region. The study was based on analysis of import dependency indicator, and impact of gas infrastructure investments in Poland on regional gas transit capabilities. The objective was to answer the following two research questions:

1. What is the real position of the Russian supplier on the European gas market, and in the CEE region in particular?
2. Whether the Świnoujście LNG terminal has a potential to allow Poland became the regional natural gas distribution center for Central and Eastern Europe?

3. To what extent LNG affects the gas security in Central and Eastern Europe?
4. What are the prospects of cooperation in the gas transmission between Central and Eastern Europe and the Balkans countries?
5. What is the Russian response to recent developments in Polish LNG strategy?

1.1 The problem of gas sector diversification in Central and Eastern European countries

The European Union is searching for means to depoliticise gas relations with Russia, and counteract its dependence on the dominating supplier. At the same time, due to geographical closeness, the EU is practically forced to be dependent on Russia. In the EU-28 Gross Primary Inland Consumption of gas is up 23%, wherein the import dependency ratio is 67% (as of 2014) and it is projected to continue increase. Most of the raw material comes from Russia - which is the most important provider of the natural gas - almost 40% of EU gas imports in 2013 (Statistical Pocketbook 2015, 26, 44). The role of Russia as the natural gas exporter for the EU according to predictions is going to grow, and in 2030 it will reach half of the 84% of the import needs of the EU (European Communities 2008, 13). This shows the quite huge fuel dependence of the EU and its member states, thus forcing the members to look for ways to diversify supplies.

The main weakness of the EU's energy policy is the lack of a common supply strategy of Member States mainly due to differences in the gas import scale but also the different ratio of supplies diversification. The main receiver of Russian gas is Western Europe (namely the United Kingdom, Germany, and Italy), consuming as much as 2/3 of the Russian gas at the European market (Germany and Italy alone consist more than half of the import to EU-15). Consequently, the EU-13 states are economically nearly irrelevant for Gazprom¹.

The issue of safety and diversification of gas supplies is especially vital in Central and Eastern Europe separated from the Western countries by a "gas curtain". This is due to the fact that while the EU-15 has a greatly developed diversification structure of supply directions, the "new Europe" states still remained dependent on one supplier, i.e. Russia. The gas import balance of the EU-15 shows on average a 20% involvement of Russia and for the CEE states it ranges from 65% to 100% (see Fig. 1). Russia is still the gas monopolist for the Visegrád Four (V4) leading to a great political vulnerability of the region, Central and Eastern Europe region is fully dependent on Russian gas, and history shows that this supplier is unstable and uses its resources as a tool of political pressure.

According to the estimates of the European Commission, the increase in demand for natural gas in the East-Central European states (excluding the Baltic states), in comparison to the values in 2009, is going to amount to between 23 billion m³ and 33 billion m³ in the period 2020–2030. The demand of Poland, Hungary and Romania constitutes ca. 2/3 of the whole demand of the CEE countries. Such a high dependence on the import of natural gas from a single source may be treated as a threat to the safety of country energy supplies. A poorly diversified structure of supplies and the low development level of an energy infrastructure, including cross-border links in the region, does not make the situation any better.

Therefore question comes how then to strengthen the gas sector diversification within the V4 and Balkans states? The gas markets in the V4 states are too centralised and monopolised, and there is a lack of competition of supply. In the region of south-eastern Europe, central-eastern Europe, and the Baltic, many countries are heavily dependent on a single gas supplier, and would, therefore be the hardest hit in case of a supply crisis. While the North-West European gas markets are competitive and well-connected, with access to several sources of natural gas – including a number of terminals with substantial capacity to import LNG – markets of the Baltic, central-eastern, south-eastern and south-western regions are less developed. The new EU's energy strategy sees a solution for these issues in

the expansion of LNG terminals (EU, 2016). The global LNG market is undergoing a dynamic development, already playing a significant role in EU gas supplies, and could become more important over the coming years². Poland due to its geopolitical position and access to the Baltic Sea may play an important role in the diversification of natural gas supplies in the Baltic region and the creation of new routes and sources of gas supplies to CEE states, connecting them with the Balkan countries transmission infrastructure. Therefore, recent Polish investments increase the diversification of gas supplies in the Baltic Sea region and Central and Eastern Europe, although the necessary condition for increasing the energy security of the CEE countries is to increase the infrastructural connections in the region which mean network its markets (by interconnectors), and strengthen cooperation between companies with similar interests.

The results presented in this paper are autor's own analysis based on documentary review (Polish energy companies strategies, reports and government documents, press releases and monographs (Młynarski 2011) in the period of 2011-2016. The research was undertaken, in part because of the major impact of the Świnaoujście LNG terminal construction to the import circumstances and energy security in Poland. According to T. Boersma (2015, XI, XII), around 90% of Polish natural gas demand can be covered by sources other than Russian gas. The author conducted an analysis of the conditions of Poland's and regional natural gas consumption and import needs. As a result, the scale of dependence on gas imports from Russia was identified. Then a brief description of Polish activities taken for diversification and development of infrastructure of gas import and transit of gas was completed.

The remainder of this paper is organized as follows. The second section discusses the empirical evidence from the literature, methodology and hypotheses. The third section presents the background data and statistics. The fourth section assesses the potential impact of the construction of an independent gas import infrastructure in Poland to reduce import dependency of CEE countries. The fifth section shortly discusses Russia's strategy to counter de-monopolization of the regional gas market and the sixth section concludes. Author's finding is that there is a great potential to reduce import dependence on Russia either for Poland and with the usage of Polish transmission networks throughout the region, and for the Baltic states, V4, and in the long run even for the Balkan states.

The main motivation for writing this paper was that fact that Poland was the first time through building Świnoujście LNG terminal gained a real tool to reduce its dependence on Russian natural gas, and making a real change in the prevailing from decades scheme of dependence. Poland aims at becoming a regional leader in cooperation and integration of energy systems. The article is part of the ongoing debate on the de-politicization of EU gas relations with Russia and shows directions of actions to be taken to achieve this goal.

1.2 Brief literature review, methodology, and hypotheses

An important aspect of energy security research is to analyze the key sources of diversification, and country own potential of mineral resources, and to outline the prospects for new inter-countries connections. Problem of reducing European dependence on Russian gas – to separate natural gas security from geopolitics – was analyzed by the author in the monograph (Młynarski, 2011, 178-180).

The issue of instrumentalization of hydrocarbons usage for geopolitical and geoeconomic reasons is widely discussed in the European and world literature. The importance of energy resources as an instrument of political influence in the modern world and shaping assumptions of (geo)strategies of international life participants in various parts of the world was analyzed by G. Luft, A. Korin (2009). Their studies showed that Russia aims at regaining a political and economic impact over the so-called “near abroad” using variable energy resources as a geopolitical tool. P. Högselius (2013) observed that

Russian natural gas has become an „energy weapon” analogous to the OPEC’s oil weapon and argued that such a weapon might be – and is possibly already being – used not only against Ukraine and others former soviet republics but also against Western Europe. The Author concluded that energy is one of many fields in which international trade is not a “purely economic” phenomenon. R. Dickel et. al, (2014) in their report proved that the main additional source of non-Russian gas for Europe up to 2030 will be LNG. The authors also highlighted that countries with strong geopolitical fears related to Russian gas dependence will need to either terminate or not renew on expiry, their long-term contracts with Gazprom. This will result in substantial additional infrastructure costs for LNG import terminals and pipeline connections, or investments in alternative energy sources, energy conservation, and efficiency measures.

Dependence of the former Soviet republics from Russia and their importance as a transit way for hydrocarbons from the East to the West was analyzed by Margarita M. Balmaceda (2012). T. Boersma (2015) investigated that integrating EU markets and enhancing cooperation between members states is the most efficient tool to enhance energy security and additional incentives for gas infrastructure development are needed in parts of the EU. T. Boersma emphasizes that Poland, which has, rightly or not, been one of the most vocal member states when it comes to the dangers of dependence on natural gas from Russia, has in just a couple of years’ time and with the support of EU funding, developed additional interconnection facilities with neighboring countries, most prominently Germany.

In this research paper the author applied research methodology typical for political sciences, using empirical observations and statistical analysis of gas demand data and by examining conditions, the potential of Poland energy resources and determinants shaping the Polish energy policy in the context of import dependence of natural gas from Russia. Results helped to identify opportunities for diversification of natural gas supplies in the Baltic Sea region and Central and Eastern Europe. The author also used the method of statistical comparison in relation to the assessment of the degree of differentiation of the “old” and “new” EU countries from Russia. To discuss relations between the EU - Germany - Russia the historical-comparative method was used, which allowed explaining contingency of Central European countries from Russia and attempts taken to depoliticise the relationships in the gas sector.

In connection with the considerations above the following hypothesis is formulated: 1). Poland, despite active efforts to use its geopolitical situation will not become a gas hub for the CEE countries, mainly due to powerful prevention actions that were taken by Russia (completion of the NS2 pipeline); 2). Construction of the LNG gas terminal will strengthen the Polish negotiating position towards Gazprom and for the first time will release Poland from the Russia gas supply monopoly; 3). To what extent the CEE countries will benefit from the possibility to diversify gas supply depends mainly on their political will because the technical conditions have been created by Poland.

2 Background data: Poland’s gas resources and the ambitions to become a regional gas hub

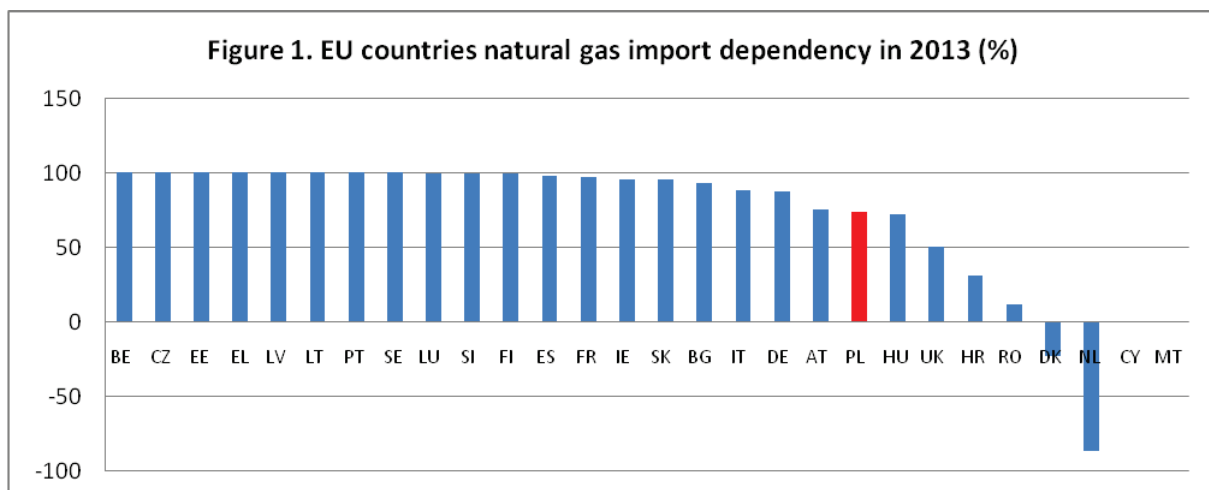
Energy security of Poland is based on coal, being a basis of county energy security since 87% of electricity produced in 2014 was obtained from it. Nevertheless natural gas role in the country’s economy increasingly grows up. Natural gas resources in Poland amount to 132 billion m³ (2014). The share of gas in the national energy consumption is 24%, while coal up 55%. In 2015 domestic extraction of natural gas (4.5 billion m³) covered almost 1/3 of the annual demand (approx. 16 billion m³ of gas per year). The remaining part was obtained from imports, mainly from Russia, (about 9.2 billion m³). Assuming that domestic production remains constant at approx. 4.5 billion m³, import needs to amount from 10 to 12 billion m³ per year.

Gas imports from Russia is completed under the so-called Yamal Contract - prolonged to 2022. Under the terms of this agreement, natural gas from Russia to Poland (and further to Germany) flows along two routes: from the territory of Belarus through the Yamal-Europe pipeline and from the territory of Ukraine (approx. 3.8 billion m³). The remaining part of natural gas, thanks to the recent years extension of cross-border interconnectors comes from Germany (approx. 2 billion m³) and Czech Republic (0.5 billion m³).

There were several investments completed between 2009 -2014 in the Polish gas sector by the Inwestycje Gaz – System S.A. company (subsidiary of the Gaz System SA – the Polish national TSO) such as:

- providing service of virtual reversible transmission on the Yamal gas pipeline (5.5 billion m³/year, Poland - Germany)
- construction of the LNG terminal in Świnoujście (5 billion m³/year)
- expansion of transmission capacities in Lasów point of entry (a total of 1.5 billion m³/year, Poland - Germany)
- construction of the interconnector in Cieszyn (0.5 billion m³/year, Poland – Czech Republic).

Thanks to these investments, there is a high probability that Poland will achieve the natural gas import independence in 2018, while in 2013 imports from Russia amounted to up to 75%.



Adapted from Statistical pocketbook (2015, 72).

Expansion of the Świnoujście LNG terminal, construction of new international connections and reaching a total independence of natural gas supplies are the main objectives of the new Gaz- System SA ten years strategy. The company wants to gain a leading position in the region and expand its transmission network to be able to receive LNG deliveries from around the world and transport them further to neighboring countries. For this purpose, the national TSO systematically develops the gas transmission infrastructure within the country: 1). the Szczecin-Lwówek gas pipeline (188 km) makes possible natural gas transmission from a new northern point of entry (the LNG terminal) to the central Poland; 2). high-pressure gas pipeline Lwówek - Odolanów (168 km) as key investments within the EU supporting the North-South Gas Corridor. Completion is expected the fourth quarter of 2018.

The Gaz-System SA ambition is to create a gas hub, which would allow Poland to act as a regional gas trading center. As a part of the 2016-2025 strategy, the company wants to invest annually from 1 to 1.1 billion PLN. During this time, 2000 km of new and modern gas transmission pipelines in the

western, southern and eastern Poland is planned for construction. These investments play a key role in the whole country strategy because they will allow for the gas transmission to neighboring countries.

Poland is increasingly likely to become the Central and Eastern Europe gas center. Gaining momentum works on planned gas connections with the Czech Republic, Slovakia and Lithuania, as well as finalization of the Świnoujście LNG terminal construction, create a new energy map of the Old Continent. Poland will be its strong point.

3 Political analysis: how planned and realized gas import alternatives will strengthen the energy security of the CEE countries?

Due to its geographical location and access to the Baltic Sea, Poland may play an important role in the regional gas supply diversification projects for the V4 and the rest of Central Europe. Poland's geopolitical location allows it to act as a “bridge” between Germany and Russia and between the Baltic and the Black Sea. The country aspires to the role of an energy hub for the CEE region striving to limit Russia gas supplier dominant position, as it uses raw materials as an instrument of political pressure serving the purpose of re-imposing its political influence in the region (Strategia Gaz-System 2016; Malinowski 2015).

3.1 The LNG (Liquefied Natural Gas) terminal in Świnoujście

The terminal for importing and regasification of liquefied natural gas transported by sea to the Świnoujście port is the largest and most significant investment aimed at enhancing Polish energy security. For Poland, it's an investment of strategic importance and it allows receiving and processing of LNG deliveries by sea from virtually every corner of the world. The terminal is the first project of such scale in East-Central Europe and the Baltic Sea region. The expansion of its regasification capacities from the current 5 million m³ of to 10 mln m³ annually should provide better access to global markets.

The terminal in Świnoujście was officially opened at the end of 2015. The first LNG deliveries from Qatar were completed on June 17th, 2016 (in line with a long-term contract with Qatargas), and on June 25th - the first spot delivery from Norwegian Statoil. In the initial phase of the terminal's operation, Poland will be able to import 5 billion m³/per year of gas by sea annually, which constitutes 1/3 of country gas demand. The next stage depends on the gas needs growth, and will provide an increase in regasification capacities up to 7.5 billion m³ per year, i.e. approximately 50% of current Poland's annual gas demand. The Świnoujście LNG terminal project includes the following elements:

- new breakwater on the Baltic Sea,
- port infrastructure for unloading LNG tankers,
- Szczecin-Świnoujście connector pipeline,
- the LNG terminal.

The construction of the LNG terminal has been entrusted to state company Gaz-System SA, while PGNiG (state own company too), is responsible for management of LNG deliveries (PGNiG signed in June 2009 a long term contract with Qatargas). Main advantages which are offered by the project include:

- increasing the integration of regional gas markets,
- enhancing the safety of supplies,
- enabling access to new natural gas suppliers for Eastern Europe,
- coordinating regional infrastructure projects,
- harmonising/standardising the rules applied to the market,
- making it possible to introduce regional preventive and contingency procedures.

The construction on LNG terminal is an attempt of creating new routes of gas import for East-Central European states. It will play an important role in the regional gas market of the Baltic countries and Northern and Eastern Europe. The terminal was constructed according to the best in class standards, it has the longest in Europe breakwater, modern system of LNG reception, and the highest safety certificates full containment tanks, already tested in other huge terminals (Barcelona /Spain, Zeebrugge /Belgium, Boston / USA). The pipeline network at the terminal area is 57 km long, while electricity cables length for 470 km. The terminal can receive deliveries from the most modern tankers in the world (Q-flex type).

The LNG Świnoujście terminal is an investment impacting not only the Polish market. Although it was established mainly for geopolitical reasons, it is important to make a market use of the terminal. As the largest LNG terminal in the Baltic Sea, through the expansion of the both domestic system and international transmission routes (Czech Republic, Slovakia, Latvia), it can serve as a basis for the creation of a regional gas hub for the Baltic region (it is important to note that Baltic republics still depended on the post-Soviet gas transmission system)³. The first part of the connection Świnoujście - Gdansk of about 300 km length is already under construction. Construction of another pipeline section directed towards the Baltic states is also planned. The investment enables overland gas re-export to neighboring countries like Slovakia, Czech Republic, and Ukraine. For these reasons, the Świnoujście terminal construction will be beneficial not only for Poland but the entire CEE as it will allow for the diversification of supply sources and can contribute to lower gas prices in the region. In the future the Polish terminal will be part of the North - South corridor, which together with the envisaged Adria LNG terminal in Croatia will help to achieve the energy independence of Central - Eastern and South Europe.

In addition, the LNG Świnoujście terminal perfectly matches with new EU's energy strategy, recognizing LNG as one of the most important elements of the gas supplies diversification in Northern and Central - Eastern Europe. The EU strategy towards LNG was presented on February 16th, 2016 as part of a package of proposals in the field of sustainable energy security (EU, 2016). The strategy intends to make the European market an attractive one for global LNG suppliers and facilitate access to this raw material for countries being currently depended on the single gas supplier.

3.2 The Baltic Pipe: Poland as a gate for Norwegian gas for the Baltic region

The Baltic Pipe is another strategic gas transmission infrastructure investment for Poland. The aim of the project is to construct a submarine pipeline connecting the Danish and Polish gas systems, "fed" with gas from Norwegian fields. The gas pipeline is being considered in relation to the Baltic states, but in case of new connections Poland - Slovakia, and Poland - Czech Republic, would allow both countries in Central and Eastern Europe to get access to gas from Norway (The Baltic Pipe may become in the future a part of the Scandinavian gas grid). The Czech Republic already receives Norwegian gas, but it is passed through the Germany territory. Start-up in the near future of the Nord Stream 2 (NS2) may de facto lead to the situation that almost all Czech deliveries would depend on the German gas transition system. Therefore, the Czech Republic and Slovakia may be even more interested in other than Russian gas supply sources.

A gas connection between the Polish and the Danish networks would present an opportunity to diversify sources and routes for gas in Europe by connecting transport systems in the Baltic region with the rest of the European Union. The Baltic Pipe could be also connected to the LNG Świnoujście Terminal. In this way, it will support the North-South Gas Corridor and the Baltic Energy Market Interconnection Plan Corridor, which are considered as a development priority for the energy infrastructure of the EU. The advantages of this connection are:

- supplying gas from the Norwegian continental shelf to Poland,
- connecting the LNG Terminal in Świnoujście, which would present access of the Scandinavian states to the rest of the V4 countries through the Polish industrial infrastructure,
- reinforcing the concept of inter-systemic connections between North and South Europe.

There is still the question of costs of this investment. However, the project will be co-funded from the Trans-European Energy Networks (TEN-E) programme.

3.3 North-South Gas Corridor perspectives

Poland advocate the construction of the North-South Gas Corridor, planned to connect the LNG terminal in Świnoujście through the south of Poland, Czech Republic, Slovakia and Hungary the proposed Adria LNG terminal in Croatia (Krak island). The gas corridor construction is going to be the foundations for a regional system of gas routes connecting Poland with the Czech Republic, Slovakia, Hungary as well as new EU member states of the Mediterranean Sea. The North – South Corridor will not be a separate gas pipeline, but rather a combination of existing and expanded internal transmission systems of individual countries. The corridor will consists of many two-way inter-systemic gas connections and national pipelines which already exist or are in different stages of their construction.

Changing the decision by the Croatian government to build the floating LNG terminal could accelerate its completion. Changing the business model can facilitate investment due to lower costs, which still are main obstacle in the project implementation. Raw material from the Croatian terminal would be dedicated to the Balkan countries markets, which currently are poorly diversified in terms of gas supply routes, but possibly would also supply natural gas to Central European markets, such as Czech Republic and Slovakia, and Slovenia (via Baumgarten point of entry).

If North-South gas corridor is completed, it will allow for the integration of regional gas markets, and by providing access to new raw material sources in the north and south of the continent will increase the energy security and economy competitiveness of the entire Central and Eastern Europe. The corridor will provide greater coordination of regional infrastructure projects, and gradually contribute to unification of gas markets functioning rules. Thus will be a practical implementation of European Energy Union, finally leading to elimination of gas curtain that was historically dividing “old” and “new” Europe. Additionally, integration of national gas transmission networks will enable the implementation of regional prevention and emergency procedures to be applied in a case of crisis, either result from natural disaster, as well as political and economic problems.

4 NS2: Russian response to the Polish strategy of regional gas supply diversification

The only but strategic source of gas deliveries into Poland that is not controlled by Russia is the LNG terminal in Świnoujście⁴. To-date, the Polish gas system, on account of historical aspects, was adjusted to the transmission of the fuel from the east to the west. The Polish diversification strategy of natural gas supplies may break the monopoly of Russian deliveries in the region and may be conducive to making Poland an important player in the gas market in this part of Europe. Therefore, Russia is trying to undermine the role of the Polish LNG terminal by taking plans on construction of Nord Stream 2 pipeline, which is going to fill the German market with gas from Russia (bringing an increase in throughput of the Baltic gas transmission system from Russia to Germany by 55 billion m³, up to 110 billion m³ per year in total). Gazprom activities – aimed at diversification of gas transportation routes (Miller 2016) in practice lead to saturation of the European market with the Russian gas. In consequence this can marginalize operational capabilities of the Świnoujście LNG terminal (Dąbrowski et al.). The surplus supply of gas will lower the product’s prices and the cheap

gas from Russia will hinder the development of the independent gas market in Central and Eastern Europe⁵. The European market will gain access to a significant volume of cheap gas, yet not to new sources of supply, which will solidify Russian's advantage in price negotiations.

Thanks to the supplies of liquefied gas, Poland could neutralise the impact of Gazprom; however, it is feared that the gas that will be transported to Germany via Nord Stream 2 is not going to be sent further to the west, but will be redirected to the CEE countries. The raw material from Nord Stream 2 will be sent, via the new German gas pipeline, EUGAL/OPAL 2 with the length of 485 km, to Austria (Baumgarten), as well as to the Czech Republic and Slovakia, which will become the most probable route for distribution of gas from NS2. Therefore, Germany is going to reinforce its role as the gas distribution centre for the CEE region. Even though the V4 countries as well as Latvia, Lithuania, Estonia, Romania and Croatia sent a letter of protest to the European Commission pointing out that the construction of Nord Stream 2 poses a threat to energy safety in Central and Eastern Europe, yet in a long-term perspective, the lower price of gas from NS2 may undermine Polish efforts at development of LNG market in the CEE. Implementation of Nord Stream 2 will also reduce the role of Ukraine, which is going to lose significance as a transit state for the Russian gas to the European Union and will solidify Gazprom's monopoly in the region. The construction of the NS2 pipeline also undermines Poland's significance as a transit country (the Yamal–Europe gas pipeline running across Russia, Belarus and Poland to Germany).

5 Conclusions

Russia is and will remain an important exporter of natural gas to Europe; however, an extension of LNG terminals in the Baltic Sea will increase the CEE countries energy safety and will allow a more flexible gas import policy. LNG already plays a key role to play in ensuring the diversity, reliability and competitiveness of the gas system. Most LNG regasification capacity is found in Western-Europe, at the same time the most vulnerable countries from CEE which are mainly dependent on one supplier with no or insufficient access to LNG as a potential diversification source either directly or through neighboring countries. Therefore, European gas companies should invest in the development of the gas infrastructure along the north - south axis, from the Polish LNG terminal to its counterpart in Croatia. Enhancing regional cooperation by ensuring better access through interconnections, will strengthen energy security in CEE countries. The countries in the Baltic region and south-eastern Europe which are highly dependent on Russian gas, and hence extremely vulnerable to interruptions, could substantially reduce imports of Russian gas by the early 2020s, by a combination of LNG supplies and pipeline gas interconnections.

Poland has been consistently implementing its plan for becoming independent in respect to gas supplies. Two-thirds of Polish natural gas demand can be covered by sources other than Russian gas. The LNG terminal will increase not only the country energy safety, but as well the Baltic and V4 states. Obviously, buyers in Poland like anywhere else will buy the cheapest available feedstock, which is Russian gas. However, the key is to have access to alternatives as it allows to make an attempt of putting the gas contracts with Gazprom on a market basis. In the long-term, the Świnoujście LNG terminal may become one of the pillars for gas safety in the CEE, being a key point of the North-South corridor. Thanks to it Poland may become an active participant in the new gas layout in Europe. Access to the global LNG market also opens great opportunities for the Polish economy with respect to natural gas trading and may significantly contribute to the strengthening of Poland's position - which aspires to the role of the regional energy hub and natural gas distribution centre - on the European gas trade market.

Irrespective of this, the construction of the Nord Stream (1 and 2) pipelines from Russia to Germany on the Baltic bed substantially reduced Poland's role as a transit country in transporting energy raw

materials. Russia aims at undermining Poland's role as a regional gas distributor from the LNG terminal by causing the excessive supply of natural gas sent via Germany to the Czech Republic and Slovakia. This is aimed at blocking the competitiveness of the Polish LNG terminal and undermining profitability. In this way, Russia successfully undermines European efforts for de-politicization of its gas relationships. On the other hand, NS2 may prove beneficial for consumers because it will lower the gas price in this part of the EU. In the long-term increase in the sources of supply increase the competitiveness of the market. Therefore, diversification is the best tool to bring benefits to consumers and to liberalize the gas market, leading to encouraging the competitiveness of European economies.

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¹ Countries making up the European Union before the accession of new members in 2004 and 2013: Austria, Belgium, Denmark, Finland, France, Greece, Italy, Spain, Netherlands, Ireland, Luxembourg, Germany, Portugal, Sweden, and the United Kingdom.

² In 2014, pipeline import capacity to the EU stood at 490 bcm/a and LNG import capacity at 197 bcm/a.

³ Lithuania is using a floating type LNG terminal in Klaipeda but it has a very limited regasification capacity.

⁴ Even the import from Germany is based on the supply from the Nord Stream pipeline, which further feeds the OPAL pipeline along Poland’s western border.

⁵ Gas prices in the Baltic states and the CEE are approx. 20% higher than in the western part of the European Union. Usage of the LNG gas will allow for significant reduction of such prices.